

as is well known, these parts are principally composed of an upper and a lower pair of oppositely curved, stout, falcate hooks, serving as scrapers, working in opposite directions in boring or rather scratching a vertical hole in the earth in which to deposit eggs. Plainly the oviposition of this creature must be something quite different and very likely analogous to that of the *locustodea*, for these hooks or scrapers are reduced to a couple of sets of straight, compressed, tapering, bluntly pointed laminae, entirely without serrations or armature of any kind, and attingent only at tip, the

upper pair the larger. They would appear to be useful only in crowding eggs into already existing crevices of wood or bark. Such a difference in sexual armor between two closely allied species I have never before seen.

Another point of interest in the species is the somewhat unusual contrasts of color and somewhat vivid color, especially in the antennae, in an insect which otherwise by its monochrome of dead leaf brown would seem to be gaining defence by avoiding vividness and contrast. Such are some of the anomalies in nature.

#### LOWNE'S ANATOMY OF THE BLOW-FLY.

The first part of Lowne's Anatomy, Morphology and Development of the Blow-fly has just appeared. The prospectus announced five quarterly parts each with about 64 pages of letterpress four plates and some 20 original drawings. As usual, however, the first part runs beyond anticipations, containing 98 pages. The introductory matter of 31 pages gives a life history of *Calliphora*, an introduction to insect anatomy in general and the broad characteristics of the Diptera and its subdivisions; while the body of the part is given up to the anatomy of the larva; half a dozen brief topical bibliographies are scattered through the Part and a brief appendix gives methods for histological work.

#### HYDROCYANIC ACID SECRETED BY POLYDESMUS VIRGINIENSIS, DRURY.

Guldensteeden-Egeling has shown (Pflüger's Archiv f. d. ges. physiol., 1882, v. 28) that *Paradesmus (Fontaria) gracilis*, Koch, a myriopod indigenous to the Fiji Islands, Moluccas, etc., but which has now become acclimatized in some of the hot-houses of Europe, produces a secretion that contains besides benzaldehyd free hydrocyanic acid. In the same year Weber (Archiv f. mikr. anat., v. 21.) showed that the repugnatory glands which produce the secretion open near the median dorsal line on certain segments

and that it is only from these segments that the characteristic odor of prussic acid is diffused. Haase in a recent note, from which I have taken these bibliographical references, has again called attention to this curious secretion. (Sitzungs b. d. Gesell. naturf. Freunde zu Berlin, Jahrgang 1889, p. 97.)

While collecting specimens of our native *Polydesmus (Fontaria) virginiensis*, a myriopod not uncommon in some parts of Wisconsin and probably in many of the middle states, I observed that when roughly handled they emitted an odor like bruised peach-leaves or cyanide of potassium. Suspecting the presence of a secretion like that of the Moluccan species, I requested a professional chemist, Mr. Davenport Fisher of Milwaukee, to test the myriopods for free hydrocyanic acid. Mr. Fisher succeeded in establishing the presence of a small quantity of the highly poisonous substance. Subsequently I found it easy to make the test for myself. A few of the *polydesmi* were ground up in a mortar with a small quantity of water. A few drops of potassium hydrate and ferrous sulphate were then added to the solution obtained by filtering the mass. On the application of gentle heat and the further addition of a little ferric chloride with sufficient hydrochloric acid to dissolve the precipitated ferrous and ferric hydrates, the faint but distinct tinge of Prussian blue attested the presence of free hydrocyanic acid.

W. M. Wheeler.